

basepairs, exon 9 is the next 83 basepairs, exon 10 is the next 46 basepairs, exon 11 is the next 139 basepairs, exon 12 is the next 63 basepairs, exon 13 is the next 129 basepairs, exon 14 is the next 73 basepairs, exon 15 is the next 110 basepairs, exon 16 is the next 81 basepairs, exon 17 is the next 88 basepairs, exon 18 is the next 190 basepairs, exon 19 is the next 127 basepairs, exon 20 is the next 150 basepairs, exon 21 is the next 75 basepairs, exon 22 is the next 144 basepairs, exon 23 is the next 138 basepairs, exon 24 is the next 74 basepairs, and exon 25 is the next 254 basepairs:

(b) at least one intron sequence, wherein said intron sequence is selected from the group of hMSH5 introns consisting of SEQ. ID NOS:55-85 and combinations thereof.

#### REMARKS

Attached hereto is an appendix showing the changes made to the claims as amended.

In order to expedite prosecution, applicants have cancelled the non-elected claims and claims 5, 9 and 11.

Claim 2 has been amended to make explicit that which was implicit. Namely, that applicants are claiming an isolated and purified nucleotide segment, which is not a cosmid, but rather has an upper nucleotide limit. This recitation is supported at page 36, lines 11-13.

The amendment to claim 3 is similarly supported at the same place as pages 51-52.

The amendment to claim 10 is supported throughout the specification, particularly pages 9-10.

New claims 41-44 are supported throughout the specification, particularly at pages 35-38.

New claim 45 is supported throughout the specification, particularly pages 35-38 above, page 4, 10, 13 and pages 55-62.

The remaining amendments are editorial in nature. As such, none of these amendments constitute new matter and their entry is respectfully requested.

Claims 5-11 were rejected under 35 USC 112, first paragraph.

Although applicants disagree with the Examiner for the reasons stated in the previous office action, applicants respectfully submit that the amendments to the claims have obviated this rejection.

Claims 2-6, 8, 9 and 39 were rejected under 35 USC 102(b) as being anticipated by Sargent et al.

Applicants respectfully submit that this rejection should be withdrawn for the following reasons.

While applicants explained in great detail the reason why the cosmid of Sargent would not anticipate their claims, the amendments to the claims have obviated this rejection. As discussed previously the cosmid vectors of Sargent are 571 kb. In contrast, the nucleotide segments claimed herein can be no more than 6 kb. Thus, there can be no anticipation.

Accordingly, this rejection of the claims has been obviated.

Claims 10-12 were rejected under 35 USC 103(a) as being unpatentable over Albertella in view of Stratagene Catalog page 39.

The Examiner has indicated that Albertella does not teach placement of the reagents into a kit format nor the specific SEQ ID Nos: 3-50.

Applicants respectfully submit that given this acknowledgment there would have been no motivation to create a kit to detect mutations in the human MSH5 mismatch repair gene. This is because there is nothing in any of these references that in any way teaches any reason to make such probes. Accordingly, applicants respectfully submit that the rejection of kit claims should be withdrawn.

Claim 7 was rejected under 35 USC 103(a).

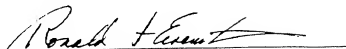
Applicants respectfully submit that the amendment to the claim has obviated this rejection.

Applicants appreciate the Examiner's indication that claim 40 contains allowable subject matter and would be allowed if rewritten in independent form. Applicants have done this.

Applicants have also added a number of additional claims, which also are directed to cDNA or mRNA. Other new claims specify that the nucleotide segment consists of the specified segment. Others, such as claim 45, merely are further groupings of specific sequences already included and searched for. In view of the foregoing, applicants respectfully submit that this amendment places all claims in condition for allowance. None of the amendments provided herein would require a new search as they merely place further limits on the specific sequences claimed. Thus, applicants submit that even if the Examiner disagrees with applicants, the amendment should be entered because it places the case in better condition for appeal.

Early and favorable action is requested.

Respectfully submitted,



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